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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

1 RECORD OF ORAL HEARING  
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3 UNITED STATES PATENT AND TRADEMARK OFFICE  
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5  
6 BEFORE THE BOARD OF PATENT APPEALS  
7 AND INTERFERENCES  
8

9  
10 Ex parte BONG-GI KIM  
11

12  
13 Appeal 2008-0869  
14 Application 10/076,075  
15 Technology Center 2600  
16

17  
18 Oral Hearing Held: May 14, 2008  
19  
20

21  
22 Before KENNETH W. HAIRSTON, MAHSHID D. SAADAT, and  
23 ROBERT E. NAPPI, Administrative Patent Judges  
24

25 ON BEHALF OF THE APPELLANT:  
26

27 PAUL DAEBELER, ESQUIRE  
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33 The above-entitled matter came on for hearing on Wednesday, May  
34 14, 2008, commencing at 9:00 a.m., at The U.S. Patent and Trademark  
35 Office, 600 Dulany Street, Alexandria, Virginia before Timothy J. Atkinson,  
36 Jr., Notary Public.  
37

MS. BOBO-ALLEN: Calendar No. 15, Appeal No. 2008-0869.  
Mr. Daebeler.

JUDGE HAIRSTON: Okay. Thank you.

MS. BOBO-ALLEN: Um-hum.

JUDGE HAIRSTON: Do you mind spelling your name for the  
record?

MR. DAEBELER: Yes, D as -- D-A-E-B-E-L-E-R.

JUDGE HAIRSTON: Okay, thank you. You may begin, I'm sorry.

MR. DAEBELER: Okay, great. My name is Paul Daebeler, and I'm  
representing the applicant, Mr. Kim. In this case the, the claims that are  
rejected are claims 1 -- 3 through, 3 through 15, 17, and 18 under Section  
103A, as being inpatentable over U.S. Patent No. 6,392,977 issued to Ando,  
et al., in view of U.S. Patent No. 5,659,531 issued to Ono, et al., and the  
admitted prior art which includes figure 1 and paragraphs 3 through 9 of the  
specification.

I was going to begin the presentation by -- the argument by discussing  
the admitted prior art and the present invention. In the admitted prior art,  
there is a dual wavelength laser diode. This is used in CD players and DVD  
players as examples. They create lights that -- light rays that hit a grating  
that then are -- impact a beam splitter and these -- this -- these light rays are  
reflected onto, onto a recording medium. Light rays are reflected back  
through the beam splitter. They also are incidental on a holographic element  
and through a concave lens and then also onto a photo detector. The  
reason -- the problem with this configuration or the enhancement that we're  
trying to achieve is that the, the hologram optical element being separate

1from a beam splitter adds another component making the manufacturing of  
2this type of device more cumbersome, also less reliable, because if there's  
3exposed to heat, then what happens is there may be some -- the bonding that  
4occurs may be impacted, and it may shift the components after substantial  
5use for the -- in the CD system, because you want -- this is a very precise  
6configuration in order that the rays precisely hit the photo detector for error  
7tracking.

8       So in our device, which is figure 2 of the present application, what's  
9happened is the -- one of the substantial improvements is to create a new  
10beam splitter which includes a hologram element, excuse me, which --  
11where the beam splitter includes a hologram surface as well as a reflecting  
12surface. So the claim -- I'm going to direct you now to the claim language  
13itself. Figure -- all the independent claims have a beam splitter, so in Claim  
141, for example, the claim language reads "A beam splitter disposed on an  
15optical path between the objective lens and the photo detector, beam splitter  
16having a first surface to reflect the light beam and the second light beam  
17toward the objective lens and simultaneously transmitting the first light  
18beam and second light beam, and a second surface on which a hologram is  
19formed to compensate for a deviation between optical axes of the first and  
20second light beams transmitted through the first surface."

21       The reason why this deviation occurred is because you have a  
22separation of the light beams. Items -- they would be items 53 and 55 in  
23figure 2, separated by I think 1 or 10 micrometers as an example in the  
24specification, and what they're doing is they're reflecting and -- off of the  
25first surface 31 onto the recording medium. Light rays are then reflected  
26from the light recording medium, transmitted through the first surface. Then

1there is a hologram section on second surface in order to correct this --  
2correct any abnormality, and then they hit the photo detector for error  
3tracking.

4 Now in the prior art, moving to the prior art, the Ando reference is the  
5one reference that's used. That is -- I'm going to point reference figure 1  
6here which is what the Examiner referred to during prosecution. In figure 1,  
7they do have a dichroic hologram in the figure. However, that is separate  
8from the beam splitter which is item 7. So 8 is a dichroic hologram, and also  
9in this case, the Examiner did note during prosecution that Ando did not  
10disclose the same type of beam splitter as we have disclosed in our  
11invention.

12 So what the Examiner did was he applied Ono, and that would be  
13figure 11A is what he referred to, and he was referring to the hologram  
14element 216 in figure 11A in order to combine these two to come up with  
15the present invention, with, excuse me, the claimed subject matter.

16 Now in figure 11A, you will notice that the semiconductor laser 210  
17and also the reflections that occur from the optical disk, all these are  
18reflecting off the second surface which has the hologram element 216.  
19However, in our claim language, as we have indicated in claim 1, we have  
20called for a beam splitter disposed on an optical path between the object lens  
21and the photo detector, the beam splitter having first surface to reflect the  
22first light beam and the second light beam toward the objective lens and  
23simultaneously transmitting the first light beam and the second light beam  
24and the second surface on which a hologram is formed to compensate for the  
25deviation between optical axis of first and second light beams transmitted  
26through the first surface. So there is a transmission through the first surface

15

1 and a reflection occurring on the first surface, and this does not show this in  
2figure 11A --

3 JUDGE SAADAT: Counsel --

4 MR. DAEBELER: -- and so that's, that's one of the arguments that we  
5were making.

6 JUDGE SAADAT: If you continue with disclosure of Ono --

7 MR. DAEBELER: Yes.

8 JUDGE SAADAT: -- figure 15 is another embodiment that defers  
9from figure 11A in the fact that the detectors are positioned at a different  
10location than the laser source.

11 MR. DAEBELER: Okay.

12 JUDGE SAADAT: So it seems like the surfaces, whether they are  
13transmitting or reflecting, pretty much depend on the positioning of  
14detectors and the laser source, and in one embodiment, they're both on one  
15side, which is shown in figure 11A. In another embodiment, they're at  
16different locations which is shown in figure 15.

17 MR. DAEBELER: Yeah, in figure 15, let me refer to the -- moment  
18to the specification. In this case, the, the difference here is that if you tried  
19to combine the two, if you tried to combine figure 1 with this particular item,  
20figure 1 of Ando, et al., shows that the configuration is for two optical disks,  
212A and 2B, and this configuration, if you took this piece, this 218, and  
22placed it into and substituted for the beam splitter, etc., it wouldn't work,  
23because it's not correcting the optical axes. In other words, one of the items  
24in there, in the claim language, was to correct the optical axes, and this does  
25not indicate here in, in Ono, et al., I do not believe it indicates that there is a  
26correction of the optical axes.

1 JUDGE SAADAT: But wasn't that the purpose of Ono? I refer you  
2to column 2, lines 45 through 47. There, there is a reference to detecting  
3focusing error signals and tracking error signals in the optical head.

4 MR. DAEBELER: Yes, but there isn't an indication, for example,  
5there are two photo sensors. If you -- there's one, one light stream coming  
6from figure 16. There aren't the two as -- whereas in our case, in figure 2, as  
7an example, items 53 and 55 show a dual wavelength laser diode. In other  
8words, two different light sources coming from the same unit. So in our -- I  
9believe in our claim language, we indicate a first light source to generate a  
10first light beam, a second light source to generate a second light beam. That  
11isn't occurring in the, in the Ono reference. In the drawing you referred to,  
12figure 16, there is only one light source. So they wouldn't be necessarily  
13correcting for the optical -- for the difference in that optical axis. I think --  
14can you refer again to that column number of the specification again you're  
15referring to?

16 JUDGE SAADAT: Sure. Description of figure 15 or the other  
17teaching about focusing error?

18 MR. DAEBELER: Column, column 2.

19 JUDGE SAADAT: Okay, column 2, starting from around line 45.

20 MR. DAEBELER: Line 45.

21 JUDGE SAADAT: Probably a couple --

22 MR. DAEBELER: Right.

23 JUDGE SAADAT: -- lines before that.

24 MR. DAEBELER: Okay, it is for the purpose of, of the tracking error  
25signals but doesn't say that it's correcting the optical axes, because there is  
26not a first light source and a second light source in this particular figure.

1 JUDGE SAADAT: But it mentions that the diffraction grating is used  
2for or at least relates to the diffraction directions.

3 MR. DAEBELER: Oh, well, the diffraction grating does, you know,  
4split maybe one light, one light source, okay, but what we have is two  
5separate light sources with, with the two separate wavelengths in our  
6particular embodiment.

7 Now the claim language says a first light source to generate a first  
8light beam, a second light source to generate a second light beam whose  
9optical axis is parallel to the optical axis of the first light beam, the second  
10light source being disposed optically farther from a recording medium than  
11the first light source. That doesn't appear in figure 16 --

12 JUDGE SAADAT: That was in Ando.

13 MR. DAEBELER: Huh?

14 JUDGE SAADAT: The Examiner relied on Ando and prior art to  
15show that.

16 MR. DAEBELER: Right, they relied on Ando to show that, but then  
17there's not an articulated reason to combine the two, because, because even  
18if you add this one into the system in Ando, suppose you add 218 into the  
19system of Ando, what items are you going to replace? It appears you would  
20try to replace the dichroic hologram 8 with a beam splitter 7 with this device.  
21But Ando's objective is to, is -- because it has two different optical disks of  
22two different densities, their objective is a different objective, and this  
23device will probably not produce that -- achieve that particular objective of,  
24of handling the two different densities. That's probably why they have a  
25system which is -- uses the, the photo detector configuration that they have.



1        So in their system, they say an optical pickup device -- in their  
2abstract an optical pickup device that is able to record, reproduce  
3information signals for first and second optical disks with different recording  
4capacities. That's not a tracking error. These are -- I mean that  
5configuration, if you place that in, 218 in that specific location, what will  
6happen is, is you will -- the hologram will be formed, you know, towards the  
7optical disk 2A and 2B and not towards the photo detector, or if you try to  
8invert it the other way, I don't believe the reflection patterns would, would  
9work out correctly, because if we put 218 and configured it -- if we put the --  
10excuse me. I apologize. If we put 219 which is the photo -- the holographic  
11element towards 2A and 2B in that configuration, we would not be headed  
12towards, let's see, 260 and 214. 214 is the optical disk, so we would be --  
13the configuration I guess would have to come in that way where you have  
14218 --

15        JUDGE SAADAT: I don't think we should be concerned about the  
16specific positioning of these components, because depending on where they  
17are, the angles could be adjusted, and that's within the ordinary skill in the  
18art knowledge and expertise, and what prompts me to think twice is your  
19figure 3 of the application.

20        MR. DAEBELER: Okay.

21        JUDGE SAADAT: And isn't that showing that the grating is, is  
22correcting the focusing of these two light beams?

23        MR. DAEBELER: Right. It's -- what it's doing, it's correcting for the  
24fact that you had two different optical axes that you started out with. Then  
25it's reflected off the disk, off the recording medium, and reflected back  
26through the, through the device, through the, the holographic element.

31

1 JUDGE SAADAT: Um-hum.

2 MR. DAEBELER: Okay, through the beam splitter, okay, and then  
3 what they're correcting for is the fact that the optical axes may, may be off,  
4 because you are trying to have the photo detector pick up the correct signal  
5 so it can track it --

6 JUDGE SAADAT: Isn't that the same as focusing?

7 MR. DAEBELER: Well, it's a tracking error signal. That's what the  
8 specification refers to as a tracking error signal.

9 Okay, and so if we tried to place this device, as I said, into this  
10 location in, in Ando, it would not be able -- it would not achieve the same  
11 result because you're -- in Ando you are referring to two optical disks, and  
12 you're relying on the fact their problem they're trying to solve is different  
13 densities of the optical disks. So that's why it seemed that one having  
14 ordinary skill in the art would not have used this device.

15 In addition, as I pointed out before, figure 15 does not show the two  
16 light sources. So I think the beam splitter plus its location are part of the  
17 invention, because you are trying to achieve a certain objective of trying to  
18 obtain, you know, a system where you can have appropriate tracking error  
19 signal, and that's what we're arguing.

20 JUDGE SAADAT: Okay.

21 JUDGE HAIRSTON: Okay, any other questions?

22 JUDGE SAADAT: No.

23 JUDGE HAIRSTON: Any questions?

24 JUDGE NAPPI: No.

25 JUDGE HAIRSTON: Thank you.

26 JUDGE NAPPI: Thank you.

1 MR. DAEBELER: Thank you very much. I appreciate your time.

2 (Whereupon, the hearing concluded on May 14, 2008.)